

Southern Appalachian Creature Feature Podcasts

Amphibian Malformations

Greetings, and welcome to the Southern Appalachian Creature Feature.

For several years biologists were noticing fairly widespread malformations among amphibians - frogs missing legs or having extra legs. There was much speculation about the cause of this disfigurement, including heightened suspicion of pesticides and other chemicals.

Researchers have recently uncovered what may be at least part of the explanation for legless frogs – dragonflies.

Frogs and dragonflies have something in common – they both spend the early part of their life in water. We're all familiar with frogs beginning lives as tadpoles, then gradually growing legs, losing their tail, and turning into frogs. Dragonflies also spend their juvenile life stage in water in a form that looks nothing like the dragonfly we're used to seeing around ponds and streams. Young dragonflies are predators crawling on the bottom of streams or lakes. They have an oversized, hinged lower jaw which they can extend to grab food and bring it to their mouth.

Researchers in Britain and the United States decided to see how various aquatic predators would interact with tadpoles. While most of the predators they tested had nothing to do with the tadpoles, they found that the young dragonflies would grab and chew on the hind legs, often chewing them off. If a tadpole is young enough it can completely re-grow the lost leg, otherwise the tadpole will have a permanently malformed leg.

For WNCW and the U.S. Fish & Wildlife Service, this is Gary Peebles.